

# RADIATION SOLUTIONS INC.



## RADIATION SOLUTIONS

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# Radiation Solutions Inc.

Radiation Solutions Inc. (RSI) is a Canadian-based company specializing in advanced radiation detection and monitoring systems, with a focus on portal monitors for diverse applications. Their technologies are designed to ensure safety and compliance in industries such as steel, scrap, recycling, and border security.



RSI's portal monitoring systems are engineered to detect and identify radioactive materials in vehicles and cargo, providing real-time analysis and alerts. These systems are fully modular, allowing for easy integration into existing infrastructures and adaptability to various operational requirements. With features like digital signal processing and spectral analysis, RSI's solutions offer high sensitivity and minimal false alarms, ensuring reliable performance in challenging environments.

Trusted by industries worldwide, Radiation Solutions Inc. delivers robust and efficient radiation monitoring solutions that support operational safety and regulatory compliance.

# HANDHELD MONITORS



## RS-230 BGO Handheld Spectrometer - Radiation Solutions

The RS-230 BGO Handheld Spectrometer (Radiations Solutions) is a portable handheld radiation survey search device for use in the geophysical industry. Using a BGO give very significant increase in performance over the normally used NaI detector (3x).



### RS-230 BGO Handheld Spectrometer features:

- single button operation
- high countrate: 65, 535
- protection: IP67
- rugged design
- digital LCD display
- analyses single channel and multichannel
- PC connectivity: USB or Bluetooth
- detector: BGO 2×2", 103 ccm

Read more about the RS-230 BGO Handheld Spectrometer on the [Radiation Solutions website](#)

## RS-125 Handheld Spectrometer - Radiation Solutions

The RS-125 Handheld Spectrometer (Radiation Solutions) is an advanced mobile instrument for radiation survey. The device is mainly used for spectral analyses in the geophysical industry. The RS-125 has the highest sensitivity in the market of spectrometers and is simple in use. There are no test sources required, the spectrometer stabilizes automatically on the different forms of radioactivity (K, U and Th).



### RS-125 Handheld Spectrometer features:

- single button operation
- digital LCD display
- detector: NaI(Tl) 2×2"
- analyses single channel and multichannel
- PC connectivity: USB or Bluetooth
- high countrate: 65, 535
- protection: IP67
- rugged design

Read more about the RS-125 Handheld Spectrometer on the [Radiation Solutions website](#)

## RS-125 Handheld Spectrometer - Radiation Solutions

The RS-125 Handheld Spectrometer (Radiation Solutions) is an advanced mobile instrument for radiation survey. The device is mainly used for spectral analyses in the geophysical industry. The RS-125 has the highest sensitivity in the market of spectrometers and is simple in use. There are no test sources required, the spectrometer stabilizes automatically on the different forms of radioactivity (K, U and Th).



### RS-125 Handheld Spectrometer features:

- single button operation
- digital LCD display
- detector: NaI(Tl) 2x2"
- analyses single channel and multichannel
- PC connectivity: USB or Bluetooth
- high countrate: 65, 535
- protection: IP67
- rugged design

Read more about the RS-125 Handheld Spectrometer on the [Radiation Solutions website](#)

# PORTAL MONITORS





## RS-200 / 3000 Radiation Portal Monitoring Systems (Radiation Solutions)

The RS-200 systems (Radiation Solutions) are 2 PMT based fully digital systems specially designed for the difficult operating conditions of scrap and aluminum processing plants. These systems combine exceptional performance with minimum false and nuisance alarms through advanced digital design and spectral analysis.



The system is fully modular which makes it easily configurable to suit local logistics and permits fast, easy maintenance. The system operates independently and has direct Ethernet connectivity to plant networks. This connectivity allows for a fully integrated plant design with the ability for RSO overview on all installed systems.

### RS-200 / 3000 Radiation Portal Monitoring Systems features:

- detector volume: 1512 in3 (23.5L) – maximum 16 detectors
- fully digital system design – no user adjustments
- 2 PMT technology for high sensitivity + high noise rejection 10/sec data sampling rate for optimum data analysis
- advanced 4096/128 channel spectrometer system for improved analysis
- spectral analysis permits rejection of the majority of false, rain and void alarms prevalent in most systems without reducing system sensitivity
- alarm classification to sort alarms into scrap and non-scrap categories for better control
- minimum nuisance alarms due to advanced signal screening and pattern recognition
- system sensitivity analysis and auto correction to minimize signal loss with NO radioactive sources required to test system performance
- 15" color touch screen display for easy user interfacing
- local printer for alarm printout
- GPS connection for accurate location and timing
- direct connection to the plant network enabling RSO overview of all alarms on all systems
- real-time (1/sec) error reporting to RSI service via the Internet for fast support and system overview
- 48V operation to minimize voltage drops on long cables
- modular system design for easy on site service by local staff for "instant" service support
- 24/7 tech support for fast responsive support from technical people if required

## RS-200 / 6000 Radiation Portal Monitoring Systems (Radiation Solutions)

The RS-200 systems are 2 PMT based fully digital systems specially designed for the difficult operating conditions of scrap and aluminum processing plants. These systems combine exceptional performance with minimum false and nuisance alarms through advanced digital design and spectral analysis.

The system is fully modular which makes it easily configurable to suit local logistics and permits fast, easy maintenance. The system operates independently and has direct Ethernet connectivity to plant networks. This connectivity allows for a fully integrated plant design with the ability for RSO overview on all installed systems.

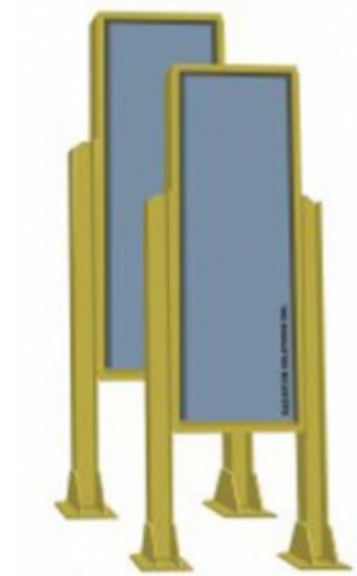


### RS-200 / 6000 Radiation Portal Monitoring Systems features:

- detector volume: 3000 in3 (24L) – maximum 16 detectors
- fully digital system design – no user adjustments
- 2 PMT technology for high sensitivity + high noise rejection 10/sec data sampling rate for optimum data analysis
- advanced 4096/128 channel spectrometer system for improved analysis
- spectral analysis permits rejection of the majority of false, rain and void alarms prevalent in most systems without reducing system sensitivity
- alarm classification to sort alarms into scrap and non-scrap categories for better control
- minimum nuisance alarms due to advanced signal screening and pattern recognition
- system sensitivity analysis and auto correction to minimize signal loss with NO radioactive sources required to test system performance
- 15" color touch screen display for easy user interfacing
- local printer for alarm printout
- GPS connection for accurate location and timing
- direct connection to the plant network enabling RSO overview of all alarms on all systems
- real-time (1/sec) error reporting to RSI service via the Internet for fast support and system overview
- 48V operation to minimize voltage drops on long cables
- modular system design for easy on site service by local staff for "instant" service support
- 24/7 tech support for fast responsive support from technical people if required

## RS-200 / 10000 Radiation Portal Monitoring Systems (Radiation Solutions)

The RS-200 systems are 2 PMT based fully digital systems specially designed for the difficult operating conditions of scrap and aluminum processing plants. These systems combine exceptional performance with minimum false and nuisance alarms through advanced digital design and spectral analysis.



The system is fully modular which makes it easily configurable to suit local logistics and permits fast, easy maintenance. The system operates independently and has direct Ethernet connectivity to plant networks. This connectivity allows for a fully integrated plant design with the ability for RSO overview on all installed systems.

### RS-200 / 10000 Radiation Portal Monitoring Systems features:

- detector volume: 5000 in3 (73L) – maximum 16 detectors
- fully digital system design – no user adjustments
- 2 PMT technology for high sensitivity + high noise rejection 10/sec data sampling rate for optimum data analysis
- advanced 4096/128 channel spectrometer system for improved analysis
- spectral analysis permits rejection of the majority of false, rain and void alarms prevalent in most systems without reducing system sensitivity
- alarm classification to sort alarms into scrap and non-scrap categories for better control
- minimum nuisance alarms due to advanced signal screening and pattern recognition
- system sensitivity analysis and auto correction to minimize signal loss with NO radioactive sources required to test system performance
- 15" color touch screen display for easy user interfacing
- local printer for alarm printout
- GPS connection for accurate location and timing
- direct connection to the plant network enabling RSO overview of all alarms on all systems
- real-time (1/sec) error reporting to RSI service via the Internet for fast support and system overview
- 48V operation to minimize voltage drops on long cables
- modular system design for easy on site service by local staff for "instant" service support
- 24/7 tech support for fast responsive support from technical people if required



## RS-300 Radiation Portal Monitoring Systems (Radiation Solutions)

The RS-300 system is a 3PMT based super-Coincidence fully digital system specially designed for the difficult operating conditions of many Steel and Scrap processing plants. This system uses medium volume detectors for good vehicle coverage. Also, in order to permit easy replacement and upgrades, the detectors are identical in size to most commonly used detectors in the field today.



The system is fully MODULAR to make it easily configurable to suit local logistics. The system operates independently but has direct Ethernet connectivity to Plant networks that permit a fully integrated Plant design with RSO overview on all installed systems. USB/Serial connectivity also enables system configuration to suit user needs for local displays, local or Network printers, scale computer integration etc.

### RS-300 Radiation Portal Monitoring Systems features:

- 3000 cu ins (3024 cu ins actual) detector assemblies – max 16 detectors
- fully digital system design – no complicated user adjustments
- 3 PMT technology for high sensitivity + high noise rejection
- 10/sec data sampling rate for optimum data analysis
- advanced 128 channel spectrometer system
- full spectral NASVD analysis for high sensitivity with essentially zero false alarms
- essentially zero void and rain alarms due to advanced spectral analysis
- fully integrated networking for integration into the plant network
- quad optical sensors with 500Hz data sampling for accurate vehicle sensing
- 12" or 15" color touch screen display for easy user interfacing
- alarm classification if required to sort alarms into scrap and non-scrap
- 48V operation to minimize voltage drops on long cables
- auto connection to RSI service centre via the Internet for fast service support
- RSO software supplied for alarm analysis direct from RSO office
- real-time (1/sec) error reporting to RSI service via the Internet for fast support
- automatic system sensitivity monitoring with auto gain correction
- modular system design for easy servicing

### Models available:

- RS-300/6000 = 2 detector system
- RS-300/9000 = 3 detector system
- RS-300/12000 = 4 detector system
- RS-300/15000 = 5 detector system
- RS-300/18000 = 6 detector system
- RS-300/21000 = 7 detector system

- RS-300/24000 = 8 detector system

## RS-400 Radiation Portal Monitoring Systems (Radiation Solutions)

The RS-400 system is a 4PMT based super-Coincidence fully digital system specially designed for the difficult operating conditions of many Steel and Scrap processing plants. This system uses large volume detectors for optimum vehicle coverage. These long detectors suffer substantially from signal loss using conventional technology so RSI has developed a 4PMT technology utilizing PMTs at BOTH ends of the detector for greatly improved signal collection and spectral shape.



The system is fully MODULAR to make it easily configurable to suit local logistics. The system operates independently but has direct Ethernet connectivity to Plant networks that permit a fully integrated Plant design with RSO overview on all installed systems. USB/Serial connectivity also enables system configuration to suit user needs for local displays, local or Network printers, scale computer integration etc.

### RS-400 Radiation Portal Monitoring Systems features:

- 5000 cu ins (4698 cu ins actual) detector assemblies - max 16 detectors
- fully digital system design - no complicated user adjustments
- 4 PMT technology for high sensitivity + high noise rejection on long detectors
- 10/sec data sampling rate for optimum data analysis
- advanced 128 channel spectrometer system
- full spectral NASVD analysis for high sensitivity with essentially zero false alarms
- essentially zero void and rain alarms due to advanced spectral analysis
- fully integrated networking for integration into the plant network
- quad optical sensors with 500Hz data sampling for accurate vehicle sensing
- 12" or 15" color touch screen display for easy user interfacing
- alarm classification if required to sort alarms into scrap and non-scrap
- 48V operation to minimize voltage drops on long cables
- auto connection to RSI service centre via the Internet for fast service support
- RSO software supplied for alarm analysis direct from RSO office
- real-time (1/sec) error reporting to RSI service via the Internet for fast support
- automatic system sensitivity monitoring with auto gain correction
- modular system design for easy servicing

### Models available:

- RS-400/10000 = 2 detector system
- RS-400/15000 = 3 detector system
- RS-400/20000 = 4 detector system
- RS-400/25000 = 5 detector system

- RS-400/30000 = 6 detector system
- RS-400/35000 = 7 detector system
- RS-400/40000 = 8 detector system